

REMARKS

Reconsideration of this application, as amended, is respectfully requested. The following remarks are responsive to the Office Action mailed November 25, 2002.

Claims 1-25 are pending.

Claims 1-25 stand rejected under 35 U.S.C. § 102(a) as being anticipated by U.S. Pat. No. 5,557,798 issued to Skeen *et al.* ("Skeen").

35 U.S.C. § 102(a) Rejection

To anticipate a claim, the reference must teach every element of the claim. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Claims 1-10 and 12-21 are not anticipated by Skeen under 35 U.S.C. 102(a) because Skeen does not disclose each and every limitation of the claims.

The Examiner has rejected claims 1 and 12 under 35 U.S.C. 102(a) as anticipated by Skeen. Claim 1, which is representative of claims 1 and 12, includes the following limitation:

registering, in response to that message, a subscription request, for messages of the first type, for that subscriber application (20) at the publisher application (10),

(Claim 1, emphasis added)

In the Office Action, Examiner states that the above limitation of claim 1 is disclosed in claim 35 of Skeen. Claim 35 of Skeen states in relevant part:

35. The apparatus of claim 28 wherein said one or more data location and access programs include one or more programs to control one or more of said computers so as to implement subscription registration means for establishing said communication path by sending a subscription

registration message to register said subscription for said desired data with the one or more computers having in execution thereon said one or more data location and access programs which are coupled to said process(es) and/or service instances which publish said requested data...

(Skeen, claim 35)

Skeen does not disclose registering a subscription request for a subscriber application at the publisher application. Instead, Skeen discloses registering a subscription request with a computer having in execution a data location and access program. As such, the subscription request is registered with the data location and access program, and not with the publisher application. For example, referring to figure 1 of Skeen, the data location and access program is a part of communications interface 20 and 22. In accordance with Skeen, communications component 30, which is part of communications interface 20, receives subscription and registration requests. (See Col. 4, lines 54-67). Application 16 does not directly receive or register a subscription request. Consequently, Skeen does not disclose registering a subscription request for a subscriber application at the publisher application, as required by claim 1.

Therefore, for the above reasons, Skeen does not anticipate claims 1 and 12 because Skeen does not disclose each and every limitation of claims 1 and 12. Because claims 2-10 and 13-21 depend directly or indirectly on claims 1 and 12 respectively, claims 2-10 and 13-21 are not anticipated by Skeen and are in condition for allowance.

35 U.S.C. § 103(a) Rejection

To establish a **prima facie** case of **obviousness**, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in

the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Claims 11, 22 and 24-25 are not obvious under 35 U.S.C. 103(a) in view of the combination of Skeen and Martino.

The Examiner has rejected claims 11, 22 and 24-25 under 35 U.S.C. 103(a) as obvious under Skeen in further view of Martino.

Claim 11 is dependent on claim 1. Therefore, in order to render dependent claim 11 unpatentable, the combination of Skeen and Martino must teach or suggest each and every limitation of claim 11, including the limitation of independent claim 1 referred to above. However, like Skeen, Martino fails to disclose registering a subscription request for a subscriber application at the publisher application, as claimed in independent claim 1. Consequently, claim 11 is not rendered unpatentable Under Skeen in further view of Martino.

Similarly, claim 22 is dependent on claim 12. In order to render dependent claim 22 unpatentable, the combination of Skeen and Martino must teach or suggest each and every limitation of claim 22, including the limitation of independent claim 12 referred to above. However, like Skeen, Martino fails to disclose registering a subscription request for a subscriber application at the publisher application, as claimed in independent claim 12. Consequently, claim 22 is not rendered unpatentable under Skeen in further view of Martino.

Dependent claims 24 and 25 depend on independent claim 23. Independent claim 23 includes the following limitation:

labeling the outgoing message with a label including the delivery session name and a sequence number;

(Claim 22, emphasis added)

Neither Skeen nor Martino, individually or in combination, teach or suggest labeling the outgoing message with a sequence number. Instead, Skeen discloses adding sequence numbers to packets of packetized messages. (Col. 5, lines 44-46). In contrast, claim 22 relates to adding sequence numbers to messages, not packets.

Martino also fails to disclose a certified message delivery system in which outgoing messages are labeled with a sequence number.

Therefore, for the above reasons, claims 12, 22, and 24-25 are not rendered unpatentable under 35 U.S.C. 103(a) over Skeen in view of Martino. It is respectfully submitted that in view of the amendments and remarks set forth herein, the above rejections have been overcome. Accordingly, Applicants respectfully submit claims 1-46 are in condition for allowance.

It should furthermore be noted that the above amendments to the claims have not been made within view to overcoming any prior art of which the Applicants are aware, or that has been cited in the present Office Action. The above amendments have been made with a view to modifying the form of the claims. For example, the word "steps" has been removed from the method claims so as to avoid interpretation of the relevant method claims under 35 U.S.C. § 112, paragraph 6.

If there are any additional charges, please charge Deposit Account No. 02-2666. If a telephone interview would in any way expedite the prosecution of the present application, the Examiner is invited to contact André Marais at (408) 947-8200.

Respectfully submitted,
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VERSION OF CLAIMS WITH MARKINGS:

1. (Amended) A method of transmitting and receiving messages in a multi-point, publish/subscribe computer-based system, the system having at least one publisher application [(10)] and at least one subscriber application [(20)] in communication over at least one communications path [(30)], the method comprising [the steps of]:
 - [a)] publishing, using the publisher application [(10)], a message of a first type over the communications path [(30)], without knowing the address of an intended recipient subscriber application [(20)];
 - [b)] receiving the message at at least one subscriber application [(20)];
 - [c)] registering, in response to that message, a subscription request, for messages of the first type, for that subscriber application [(20)] at the publisher application[(10)],;and
 - [d)] establishing, in response to the subscription request, a certified communications session
 - [i)] between the subscriber application [(20)] and the publisher application [(10)]
 - [ii)] in which the publisher application [(10)] communicates subsequent messages of the first type to at least the subscriber application [(20)] and monitors whether the subscriber has received each such message, thereby[,] establishing a certified message delivery session between the publisher application [(10)] and the subscriber application [(20)].
2. (Amended) The method of claim 1, wherein the message type is identified by the message content and the subscription request is for messages of [a] that content.

3. (Amended) The method of claim 2, wherein the subscriber application [(20)] registers the subscription request.

4. (Amended) The method of claim 3, wherein the message of the first type is published and later received by the subscriber application [(20)] using a subject based addressing method.

5. (Unamended) The method of claim 3, wherein the subscription request identifies the subscriber application's "inbox" address.

6. (Amended) The method of claim 2, wherein the publisher
[(a)] monitors the receipt of the message by waiting for an acknowledgement of message receipt from the subscriber and,
[(b)] if the acknowledgement does not arrive within a defined time, resends the unacknowledged message to the subscriber application [(20)].

7. (Amended) The method of claim 1 wherein the publisher application [(10)] is unknown to the subscriber application [(20)], said method further comprising:
[a)] the subscriber application [(20)] requesting registration from the publisher application [(10)]; and
[b)] the publisher application [(10)] thereafter accepting the subscriber application's [(20)'s] registration request and registering the subscriber application [(20)].

8. (Amended) The method of claim 7, further comprising the publisher application [(10)] registering the subscriber application [(20)] by the method comprising:
[a)] the publisher application [(10)] registering the subscriber application [(20)]; and

[b)] the publisher application [(10)] notifying the subscriber application [(20)] of registration.

9. (Amended) The method of claim 6, wherein the publisher application [(10)] monitors receipt of the message by:

- [a)] including a sequence number in the message to the subscriber application [(20)]; and
- [b)] deleting the message from a ledger of messages only when the subscriber application acknowledges receipt of the message.

10. (Amended) The method of claim 9, wherein the publisher application [(10)] sends a message to a plurality of subscriber applications [(20)], and deletes the message from its ledger when all of the subscribers have acknowledged receipt.

11. (Amended) The method of claim 1, further comprising distributed queuing of messages to one subscriber application [(20)] out of n-subscriber applications [(20)], wherein

- [(a)] the publisher application [(10)] does not need to know the existence of any of the n-subscribers applications [(20)];
- [(b)] the individual ones of said n-subscriber applications [(20)] indicate their availability to another one of said n-subscriber applications [(20)] as a scheduler; and
- [(c)] the scheduler routes messages to subscriber applications having appropriate availability.

12. A system for transmitting and receiving messages in a multi-point, publish/subscribe computer-based system, the system comprising:

- [(a)] at least one publisher application [(10)] and;
- [(b)] at least one subscriber application [(20)] in communication over at least one communications path [(30)],
wherein the system is configured to
 - [i)] publish, using the publisher application [(10)], a message of a first type over the communications path [(30)], without knowing the address of an intended recipient subscriber application [(20)];
 - [ii)] receive the message at at least one subscriber application [(20)];
 - [iii)] register, in response to that message, a subscription request, for messages of the first type, for that subscriber application [(20)] at the publisher application [(10)],; and
 - [iii)] establish, in response to the subscription request, a certified communications session
 - [1)] between the subscriber application [(20)] and the publisher application [(10)]
 - [2)] in which the publisher application [(10)] communicates subsequent messages of the first type to at least the subscriber application [(20)] and monitors whether the subscriber has received each such message, thereby[,] establishing a certified message delivery session between the publisher application [(10)] and the subscriber application [(20)].

13. (Amended) The system of claim 12, wherein the message type is identified by the message content and the subscription request is for messages of [a] that content.

14. (Amended) The system of claim 13, wherein the subscriber application [(20)] registers the subscription request.

15. (Amended) The system of claim 14, wherein the message of the first type is published and later received by the subscriber application [(20)] using a subject based addressing method.

16. The system of claim 14, wherein the subscriptions request identifies the subscriber application's "in box" address.

17. (Amended) The system of claim 13, wherein the publisher
[(a)] monitors the receipt of the message by waiting for an acknowledgement of message receipt from the subscriber and,
[(b)] if the acknowledgement does not arrive within a defined time, resends the unacknowledged message to the subscriber application [(20)].

18. (Amended) The system of claim 12, wherein the publisher application [(10)] is unknown to the subscriber application [(20)], wherein:
[a)] the subscriber application [(20)] requests registration from the publisher application [(10)]; and
[b)] the publisher application [(10)] thereafter accepts the subscriber application's [(2Q)] registration request and registers the subscriber application [(20)].

19. (Amended) The system of claim 18, wherein the publisher application [(10)] registers the subscriber application [(20)] by:
[a)] the publisher application [(10)] registering the subscriber application [(20)]; and,
[b)] the publisher application [(10)] notifying the subscriber application [(20)] of registration.

20. (Amended) The system of claim 19, wherein the publisher application [(10)] monitors receipt of the message by:

- [a)] including a sequence number in the message to the subscriber application [(20)]; and,
- [b)] deleting the message from a ledger of messages only when the subscriber application acknowledges receipt of the message.

21. (Amended) The system of claim 20, wherein the publisher application [(10)] sends a message to a plurality of subscriber applications [(20)], and deletes the message from its ledger when all of the subscribers have acknowledged receipt.

22. (Amended) The system of claim 12, further configured to perform distributed queuing of messages to one subscriber application [(20)] out of n-subscriber applications [(20)], in which:

- [(a)] the publisher application [(10)] does not need to know the existence of any of the n- subscriber applications [(20)];
- [(b)] the individual ones of said n-subscriber applications [(20)] indicate their availability to another one of said n-subscriber applications [(20)] as a scheduler; and,
- [(c)] the scheduler routes received messages to subscriber applications having appropriate availability .

23. (Amended) A method of certified delivery of an outgoing message in a multi-point, publish/subscribe computer-based system, the system having at least one publisher [(10)] and at least one subscriber [(20)] in communication over at least one communications path [(30)], the method comprising [the steps of]:

- [a)] establishing a certified delivery session including a certified delivery session name and a certified delivery session ledger;
- [b)] labeling the outgoing message with a label including the delivery session name and a sequence number;
- [c)] sending the labeled outgoing message; and,
- [d)] receiving the labeled outgoing message at a subscriber.

24. The method of claim 23, wherein the subscriber is a plurality of n-subscribers and an individual one of the n-subscribers is selected by one of said n-subscribers as a scheduler to receive the message.

25. (Amended) The method of claim 24 wherein:

- [a)] individual ones of said n-subscribers indicate their ability to address messages; and,
- [b)] the scheduler routes messages to subscribers based on the subscriber's indicated ability .